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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,105	05/29/2007	Hans-Helmut Bechtel	PHDE030405 US	2071

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EXAMINER

HOLLWEG, THOMAS A

ART UNIT	PAPER NUMBER
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2879

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03/31/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/596,105	Applicant(s) BECHTEL ET AL.	
	Examiner Thomas A. Hollweg	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-9 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-9 and 11-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 9, 2010, has been entered. Claims 2, 3 and 10 are canceled. Claims 11-16 are added. Claims 1, 4-9, and 11-16 are currently pending.

2. The amendments to claims 1 and 6 correcting minor informalities are acknowledged. The objections to these claims are withdrawn.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the passivating layer over the flake structure of claim 11 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

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and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4, 6-9 and 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura, U.S. Patent Application Publication No. 2002/0101152 A1, in view of Kaufmann et al., U.S. Patent No. 4,492,432.

7. With regard to claim 1, in figure 5, Kimura discloses a display comprising a ground plate (208); at least one light emitting layer (202) and at least one isolating separator layer (220), each isolating separator layer (220) being reflective and being positioned in contacting manner on said ground plate (208), wherein the at least one emitting layer, (200) and the at least one isolating separator layer (220) are positioned immediately adjacent to each other in a contacting manner [0107-0116].

8. Kimura does not expressly disclose that the isolating separator layer comprises a metal material having a flake structure.

9. Kaufmann, in the figure discloses a display device having a highly reflective layer (11) where the layer comprises a metal material having a flake structure (Abstract; col. 2, lines 45-51).

10. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Kimura device where the isolating separator layer comprises a metal material having a flake structure, as taught by Kaufmann, because a metal flake structure provides excellent reflection.

11. **With regard to claim 4**, in the figure, Kaufmann teaches that the flake structure comprises a plurality of aluminum-flakes (Abstract; col. 2, lines 45-51).

12. **With regard to claim 6**, in figure 5, Kimura discloses that the surface of said at least one isolating separator (220) layer is specular reflective [0099].

13. **With regard to claim 7**, in figure 5, Kimura discloses that light impinging on said at least one isolating separator layer (220) in an angle is at least to a part reflected in a different angle [0099].

14. **With regard to claim 8**, the examiner notes that all of the claim limitations are characteristics of the display as operated and do not expressly limit the structure of the claimed device. Kimura does not expressly disclose the efficiency of the disclosed display, however, it anticipates all of the structural limitations of claim 8. These limitations have been considered, but absent a showing of a further limiting of the structure of the display, these limitations cannot distinguish the claimed display over

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Kimura. Further, because Kimura discloses all of the structural limitations of claim 8, and discloses that the purpose of the disclosed invention is to improve efficiency [0282], as operated, the Kimura display will be characterized in that the efficacy of the display for white light with a correlated colour temperature of 6500 K is at least ≥ 0.5 lumen/W.

15. **With regard to claim 9**, the examiner notes that the claim limitation “the display is formed by an ink-jet printing or photolithography or vacuum deposition or a combination of these processes” is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation has been considered, but not patentably distinct over Kimura (see MPEP 2113). The Examiner notes further that the claimed methods for making are disclosed by Kimura [0208-0245].

16. **With regard to claim 11**, in the figure, Kaufmann teaches a passivating layer over the flake structure (Abstract; col. 2, lines 45-51).

17. **With regard to claim 12**, in the figure, Kaufmann teaches that the passivating layer comprises an oxide (Abstract; col. 2, lines 45-51).

18. **With regard to claim 13**, in figure 5, Kimura discloses that the metal material comprises one of vanadium (V), chromium (Cr), and manganese (Mn) [0091, 0099].

19. **With regard to claim 14**, in the combined Kimura and Kaufmann device discussed in the rejection of claim 1 above, the flake structure has a predetermined orientation relative to the ground plate.

20. **With regard to claim 15**, in the combined Kimura and Kaufmann device discussed in the rejection of claim 1 above, the orientation of the flake structure is adjustable (during manufacture).

21. **With regard to claim 16**, the examiner notes that all of the claim limitations are characteristics of the display as operated and do not expressly limit the structure of the claimed device. Kimura does not expressly disclose the efficiency of the disclosed display, however, it anticipates all of the structural limitations of claim 8. These limitations have been considered, but absent a showing of a further limiting of the structure of the display, these limitations cannot distinguish the claimed display over Kimura. Further, because Kimura discloses all of the structural limitations of claim 8, and discloses that the purpose of the disclosed invention is to improve efficiency [0282], as operated, the Kimura display will be characterized in that the efficacy of the display for white light with a correlated colour temperature of 6500 K is at least ≥ 5.6 lumen/W.

22. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura in view of Kaufmann as applied to claim 1 above, and further in view of Bechtel et al., U.S. Patent Application Publication No. 2003/0011306 A1.

23. **With regard to claim 5**, all of the limitations are disclosed by Kimura and Kaufmann, as discussed in the rejection of claim 1 above. However, Kimura and Kaufmann do not expressly disclose polarization plates on the display.

24. Bechtel teaches a $\lambda/4$ plate and a linear polarization layer is positioned on an organic electroluminescent display device to suppress the reflections of external light from the reflective surfaces internal to the device [0051-0052].

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25. At the time of invention, it would have been obvious for a person having ordinary skill in the art to construct the Kimura and Kaufmann display comprising at least one $\lambda/4$ plate and at least one linear polarisation layer positioned on the ground plate opposing said isolating separator layer in such a way, that ambient light that moves through the ground plate towards the isolating separator layer as well as light that moves from said isolating separator layer towards said ground plate passes said at least one $\lambda/4$ plate and at least one linear polarisation layer. These additional layers would suppress the reflections of external light from the reflective surfaces internal to the device, as taught by Bechtel.

Response to Arguments

26. Applicant's arguments have been considered, but are moot in view of the new grounds for rejection.

Conclusion

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Hollweg whose telephone number is (571) 270-1739. The examiner can normally be reached on Monday through Friday 7:30am-5:00pm E.S.T..

28. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

29. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TH/

/NIMESHKUMAR D. PATEL/

Supervisory Patent Examiner, Art Unit 2879